CLAIMS

1. A formulation intended to be applied to keratinous material and to be rinsed with an aqueous rinsing medium in the form of a stable dispersion, the pH of which is between 3 and 5.5, and comprising at least one active material, a carrier agent consisting of at least one organic polymer capable of bringing said active material to the surface of the keratinous material during the rinsing process and, optionally, at least one salt that is soluble in the formulation; the nature of the active material and of the carrier agent being such that:
the active material:
   * may or may not be in a liquid form,
   * has, in the medium of the formulation, an overall cationic or zero charge,
   * is insoluble in the medium of the formulation,
   * is stabilized in the medium of the formulation by means of a cationic and/or nonionic surfactant,
   * remains insoluble in the rinsing medium or is capable of swelling in the rinsing medium;
the carrier agent:
   * is soluble or dispersible in the medium of the formulation and in the rinsing medium,
   * has, in the medium of the formulation, an overall ionic charge that is zero or cationic,
   * is capable of developing, at the pH of the rinsing process in the rinsing medium, a sufficient number of anionic charges to destabilize the active material in the rinsing medium.

2. The formulation as claimed in claim 1, characterized in that the rinsing medium has a pH

of 5.5 to 8.

3. The formulation as claimed in either of the preceding claims, characterized in that the active material is in the form of solid particles dispersed in the medium of the formulation and is chosen from the following polymers:

a) nonionic polymers derived from at least one nonionic hydrophobic monomer,

b) polymers derived from at least one nonionic hydrophobic monomer and from at least one monomer that is cationic or potentially cationic in the medium of the formulation and, optionally, from at least one monomer that is neutral in the medium of the formulation and potentially anionic in the rinsing medium,

c) polymers derived from at least one nonionic hydrophobic monomer and from at least one monomer that is neutral in the medium of the formulation and potentially anionic in the rinsing medium.

4. The formulation as claimed in claim 3, characterized in that the monomer composition from which said polymer derives contains:

- at least one uncharged or non-ionizable hydrophilic monomer, preferably in an amount that does not exceed 50% of the total mass of monomers,
- and/or at least one zwitterionic monomer, preferably in an amount that does not exceed 30% of the total mass of monomers,
- and/or at least one crosslinking monomer, preferably in an amount that does not exceed 10% of the total mass of monomers.

5. The formulation as claimed in claim 3 or 4, characterized in that the polymer b) contains an

anionic monomer, the first pKa of which is less than 6, preferably 5, preferably 3, this being in a sufficiently small amount so that said polymer b) has, in the medium of the formulation, an overall cationic charge.

6. The formulation as claimed in any one of claims 3 to 5, characterized in that, when the active material is an ionic or ionizable polymer, the choice and the relative amounts of monomers from which the copolymer derives are such that the active material:

- is insoluble in the medium of the formulation;
- has, in the formulation, an overall cationic or zero charge;
- remains insoluble in the rinsing medium or is not capable of swelling by more than 8 times, preferably not by more than 4 times, its volume in the rinsing medium.

7. The formulation as claimed in any one of claims 1 to 6, characterized in that the active material is in the form of particles of polymer, the mean diameter of which is between 10 nm and 10 μm, preferably between 10 nm and 1 μm, and even more preferably between 10 nm and 500 nm.

8. The formulation as claimed in any one of claims 1 to 7, characterized in that the active material is a polymer that derives from monomers that are α-β monoethylenically unsaturated or diethylenically unsaturated in the case of the crosslinking monomers.

9. The formulation as claimed in any one of claims 1 to 8, characterized in that the active material is a polymer that derives from monomers, the choice and the relative amounts of which are such that

said polymer has a glass transition temperature Tg of -80°C to +150°C, most particularly of -80°C to +40°C.

10. The formulation as claimed in any one of claims 1 to 9, characterized in that the active material is a polymer that is insoluble in the medium of the formulation and in the rinsing medium, chosen from the polymers derived from at least one nonionic hydrophobic monomer and the polymers derived from at least one nonionic hydrophobic monomer and from 0.1 to 20% of their weight of at least one monomer that is potentially cationic in the medium of the formulation.

11. The formulation as claimed in any one of claims 1 to 9, characterized in that the active material is a polymer capable of swelling in the rinsing medium, chosen from the polymers derived from at least one nonionic hydrophobic monomer and from 10 to 50% of its weight of at least one monomer that is potentially anionic in the rinsing medium.

12. The formulation as claimed in any one of claims 1 to 11, characterized in that the active material in the form of particles of polymer contains, encapsulated in its particles, at least one liquid or solid hydrophobic organic active compound that is different from the active material.

13. The formulation as claimed in any one of claims 1 to 12, characterized in that the cationic charges, brought about by the possible cationic or potentially cationic units of the active material in the form of polymer and possibly by the cationic surfactant(s), at the surface of the active material dispersed in the medium of the formulation, are such that the zeta potential of the active material dispersed in the medium of the

formulation is from 0 to +50 mV, preferably from +10 to +40 Mv.

14. The formulation as claimed in any one of claims 1 to 13, characterized in that the active material is chosen from mineral or organic oils, fats or waxes of animal or plant origin, and their derivatives; silicone oils, resins or gums; aromas; essential oils; fragrances; antimicrobial agents; liposoluble vitamins and their derivatives; phospholipids; bactericides; UV-absorbing agents, alone or as mixtures.

15. The formulation as claimed in the preceding claim, characterized in that the active material comprises, solubilized or dispersed, at least one liquid or solid hydrophobic organic active compound that is different from the active material.

16. The formulation as claimed in any one of claims 1 to 15, characterized in that the weight amount of cationic and/or nonionic surfactant in the formulation is less than or equal to 25% by weight of the formula, preferably less than or equal to 5%.

17. The formulation as claimed in any one of claims 1 to 16, characterized in that the medium of the formulation is an aqueous or aqueous-alcoholic medium.

18. The formulation as claimed in claim 17, characterized in that the alcohols present in the aqueous-alcoholic medium represent up to 70% of the volume of the medium of the formulation.

19. The formulation as claimed in any one of claims 1 to 18, characterized in that the carrier agent is

any polymer that is soluble or dispersible in an aqueous or aqueous-alcoholic medium having a pH of between 3 and 8, comprising at least one unit that is neutral in the medium of the formulation and potentially anionic in the rinsing medium.

20. The formulation as claimed in claim 19, characterized in that the carrier agent comprises at least one unit that is cationic or potentially cationic in the medium of the formulation and/or at least one hydrophilic or hydrophobic, nonionic unit.

21. The formulation as claimed in any one of claims 1 to 20, characterized in that the relative amounts of the various units of the polymer constituting the carrier agent are such that, in the medium of the formulation, the overall charge of the carrier agent is zero or cationic.

22. The formulation as claimed in any one of claims 1 to 21, characterized in that the relative amounts of carrier agent, optionally of cationic surfactant and of active material are such that, during the rinsing process, the number of anionic charges developed in the rinsing medium by the carrier agent is sufficient to destabilize the active material in the rinsing medium.

23. The formulation as claimed in claim 22, characterized in that the number of anionic charges developed in the rinsing medium by the carrier agent so as to destabilize the active material is at least 1% relative to the number of surface cationic charges of the active material in the rinsing medium, and at most 200% relative to the number of surface cationic charges of the active material in the rinsing medium.

24. The formulation as claimed in any one of claims 1 to 23, characterized in that the carrier agent is a polymer chosen from polymers derived from ethylenically unsaturated monomers, natural polysaccharides that are potentially anionic, and substituted or modified polysaccharides that are potentially anionic or amphoteric, or mixtures thereof.

25. The formulation as claimed in any one of claims 1 to 24, characterized in that the carrier agent is a polymer derived:

- from at least one α-β monoethylenically unsaturated monomer that is neutral in the medium of the formulation and potentially anionic in the rinsing medium, and
- optionally from at least one α-β monoethylenically unsaturated monomer that is cationic or potentially cationic in the medium of the formulation, and
- optionally from at least one hydrophilic or hydrophobic, preferably hydrophilic, nonionic α-β monoethylenically unsaturated monomer.

26. The formulation as claimed in any one of claims 1 to 25, characterized in that the carrier agent is a random, block or grafted polymer derived:

- from at least one α-β monoethylenically unsaturated hydrophilic monomer that is neutral in the medium of the formulation and potentially anionic in the rinsing medium, and
- from at least one α-β monoethylenically unsaturated hydrophilic monomer that is cationic or potentially cationic in the medium of the formulation,
- and optionally from at least one hydrophilic or hydrophobic, preferably hydrophilic,

nonionic α-β monoethylenically unsaturated monomer.

27. The formulation as claimed in any one of claims 1 to 26, characterized in that the carrier agent derives from one or more α-β monoethylenically unsaturated monomers and has a mean molar mass by weight of greater than 5000 g/mol, preferably of 20 000 to 500 000 g/mol.

28. The formulation as claimed in any one of claims 1 to 27, characterized in that the carrier agent is chosen from:

- polyacrylic or polymethacrylic acids, alkali metal polyacrylates or polymethacrylates, preferably having a mean molar mass by weight of 100 000 to 1 000 000 g/mol,
- acrylic acid/DADMAC polymers, having a molar ratio of 50/50 to 30/70, preferably having a a mean molar mass by weight of 70 000 to 350 000 g/mol,
- acrylic acid/MAPTAC polymers, having a molar ratio of 60/40 to 30/70, preferably having a a mean molar mass by weight of 90 000 to 300 000 g/mol,
- acrylic acid/MAPTAC/linear C_4-C_{18} alkyl methacrylate polymers comprising from 0.005 to 10% by mass of alkyl methacrylate, with an acrylic acid/MAPTAC molar ratio ranging from 60/40 to 30/70, and preferably having a mean molar mass by weight of 50 000 to 250 000 g/mol,
- acrylic acid/dimethylaminoethyl methacrylate (DMAEMA) polymers, having a molar ratio of 60/40 to 30/70, preferably having a a mean molar mass by weight of 50 000 to 300 000 g/mol.

29. The formulation as claimed in any one of claims 1

to 24, characterized in that the carrier agent is a potentially anionic natural polysaccharide formed of nonionic monosaccharide units and of monosaccharide units that are neutral in the medium of the formulation and potentially anionic in the rinsing medium, these units being similar or different.

30. The formulation as claimed in claim 29, characterized in that the potentially anionic natural polysaccharide is a branched polysaccharide formed:

- of a main chain comprising anhydrohexose units that may be similar or different,
- and of branches comprising at least one anhydropentose and/or anhydrohexose unit that is neutral in the medium of the formulation and optionally potentially anionic in the rinsing medium.

31. The formulation as claimed in either of claims 29 and 30, characterized in that said potentially anionic natural polysaccharide is a xanthan gum, a succinoglycan, a rhamsan, a gellan gum or a welan gum.

32. The formulation as claimed in any one of claims 29 to 31, characterized in that said potentially anionic natural polysaccharide has a mean molar mass by weight of 2000 to 5 000 000 g/mol, preferably of 10 000 to 5 000 000 g/mol, most particularly of 10 000 to 4 000 000 g/mol.

33. The formulation as claimed in any one of claims 1 to 24, characterized in that the carrier agent is a substituted or modified polysaccharide, the natural backbone of which is formed of nonionic monosaccharide units and/or of monosaccharide units that are neutral in the medium of the

formulation and potentially anionic in the rinsing medium, said monosaccharide units being similar or different, and being substituted or modified:

- with one or more group(s) which carries or carry at least one charge that is neutral in the medium of the formulation and potentially anionic in the rinsing medium,
- and optionally with one or more group(s) which carry or carries at least one charge that is cationic or potentially cationic in the medium of the formulation,

the degree of substitution or of modification of the monosaccharide units with the entirety of the groups which carry charges that are potentially anionic and of optional groups which carry cationic charges being such that said substituted or modified polysaccharide is soluble or dispersible in an aqueous or aqueous-alcoholic medium and has an overall zero or cationic charge in the medium of the formulation.

34. The formulation as claimed in claim 33, characterized in that said substituted or modified polysaccharide contains at least one nonionic modifying group or substituent group.

35. The formulation as claimed in either of claims 33 and 34, characterized in that said substituted or modified polysaccharide is a branched substituted or modified polysaccharide, the natural backbone of which is formed:

- from a main chain comprising similar or different anhydrohexose units,
- and from branches comprising at least one anhydropentose and/or anhydrohexose unit that is neutral in the medium of the formulation and optionally potentially anionic in the rinsing medium,

the anhydrohexose and/or anhydropentose units of

said polysaccharide being substituted or modified with one or more groups which carry at least one charge that is neutral in the medium of the formulation and potentially anionic in the rinsing medium, and optionally at least one charge that is cationic or potentially cationic in the rinsing medium,

the degree of substitution or of modification DSi of the anhydrohexose and/or anhydropentose units with the entirety of said groups which carry charges that are ionic or potentially ionic ranging from 0.01 to less than 3, preferably from 0.01 to 2.5,

with a ratio of the number of charges that are potentially anionic in the rinsing medium to the number of charges that are cationic or potentially cationic in the medium of the formulation ranging from 100/0 to 30/70, preferably from 100/0 to 50/50.

36. The formulation as claimed in any one of claims 32 to 35, characterized in that said substituted or modified polysaccharide has a mean molar mass by weight of 2000 to 5 000 000 g/mol, preferably of 10 000 to 5 000 000 g/mol.

37. The formulation as claimed in any one of claims 32 to 36, characterized in that the natural backbone of said substituted or modified polysaccharide is a galactomannan.

38. The formulation as claimed in any one of claims 32 to 37, characterized in that the natural backbone of said substituted or modified polysaccharide is chosen from:

- carboxymethylgalactomannans, in particular carboxymethylguars,
- carboxymethylhydroxypropylgalactomannans, in particular carboxymethylhydroxypropylguars,

- carboxymethylhydroxypropyltrimethylammonium chloride galactomannans, in particular carboxymethylhydroxypropyltrimethylammonium chloride guars,
- carboxymethylhydroxypropyl-hydroxypropyl-trimethylammonium chloride galactomannans, in particular carboxymethylhydroxpropyl-hydroxy-propyltrimethylammonium chloride guars.

39. The formulation as claimed in any one of claims 1 to 38, characterized in that the amount of carrier agent present in said formulation is between 0.001 and 50 parts by weight, preferably between 0.01 and 5 parts by weight, most particularly between 0.05 and 2 parts by weight per 100 parts by weight of active material.

40. The formulation as claimed in any one of claims 1 to 39, characterized in that it comprises at least one soluble salt chosen from chlorides, bromides, iodides, nitrates, sulfates and sulfonates of an alkali metal, or of ammonium, alone or as mixtures.

41. The formulation as claimed in any one of claims 1 to 40, characterized in that it is in the form of an aqueous or aqueous-alcoholic dispersion comprising per 100 parts of its weight:

- from 0.01 to 50, preferably from 0.05 to 30, parts by dry weight of active material,
- from 0.01 to 35, preferably from 0.01 to 20, parts by dry weight of cationic surfactant,
- from 0.001 to 5, preferably from 0.01 to 1, part by dry weight of carrier agent,
- at most 2 parts by weight of soluble salt.

42. The formulation as claimed in any one of claims 1 to 41, characterized in that it also comprises one or more usual constituents chosen from cationic

conditioners, styling agents, volumizing agents or fixing agents for the hair, repairing, nourishing or moisturizing agents, water-soluble monovalent mineral salts, dyes, fragrances, vitamins.

43. A method of treating keratinous material by bringing said material into contact with the formulation as claimed in any one of claims 1 to 43, and then rinsing it with an aqueous rinsing medium.

44. The method as claimed in claim 43, characterized in that the active material contains, in encapsulated, dispersed or solubilized form, at least one liquid or solid hydrophobic active compound that is different from the active material, and in that said method is also intended to provide the keratinous material with the additional benefits intrinsic to said hydrophobic organic active compound.

45. A method intended to improve the volumizing properties and/or the properties that help styling and/or the properties consisting of a fixing effect for keratinous fibers, consisting in bringing said fibers into contact with the formulation as claimed in one of claims 1 to 42, and then in rinsing said fibers with an aqueous rinsing medium.

46. A method for improving the depositing of an active material onto keratinous material, during which a formulation is applied to said material and then a rinsing process is carried out with an aqueous rinsing medium;
said formulation comprising at least one active material and, optionally, at least one salt that is soluble in the formulation, and being in the form of a stable dispersion, the pH of which is

between 3 and 5,

the active material containing, optionally in an encapsulated, dispersed or solubilized form, at least one hydrophobic organic active compound that is different from the active material; said active material, which may or may not be in a liquid form, having, in the medium of the formulation, an overall cationic or zero charge, being insoluble in the medium of the formulation, being stabilized in the medium of the formulation by means of a cationic surfactant, and remaining insoluble in the rinsing medium or being capable of swelling in the rinsing medium;

by addition of at least one carrier agent consisting of at least one organic polymer that is soluble or dispersible in the medium of the formulation and in the rinsing medium, having, in the medium of the formulation, an overall ionic charge that is zero or cationic and being capable of developing, at the pH of the rinsing process in the rinsing medium, a sufficient number of anionic charges to destabilize the active material in the rinsing medium.

47. The use, in a formulation intended to be applied to keratinous material and to be rinsed with an aqueous rinsing medium, said formulation being in the form of a stable dispersion, the pH of which is between 3 and 5.5, and comprising:

at least one active material, which may or may not be in a liquid form, that has, in the medium of the formulation, an overall cationic or zero charge, that is insoluble in the medium of the formulation, that is stabilized in the medium of the formulation by means of a cationic surfactant, and that remains insoluble in the rinsing medium or is capable of swelling in the rinsing medium;

optionally, at least one salt that is soluble in the formulation;

of at least one carrier agent consisting of at least one organic polymer that is soluble or dispersible in the medium of the formulation and in the rinsing medium, that has, in the medium of the formulation, an overall ionic charge that is zero or cationic and that is capable of developing, at the pH of the rinsing process in the rinsing medium, a sufficient number of anionic charges to destabilize the active material in the rinsing medium,

as an agent capable of bringing said active material to the surface of the keratinous fibers during the rinsing process.

48. The method as claimed in one of claims 43 to 46, or the use as claimed in claim 48, characterized in that the amount of formulation used, expressed as solids content, is from 0.001 to 10 g/l, preferably from 0.05 to 2 g/l during the rinsing process.